R E P O R T R E S U M E S

ED 017 748 AA 000 291

INFORMATION RETRIEVAL FOR EDUCATION AND TRAINING.

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PUB DATE 14 AUG 68

EDRS PRICE MF-$0.25 HC-$0.56 12P.

DESCRIPTORS- *INFORMATION RETRIEVAL, *INFORMATION SERVICES, *EDUCATION, INFORMATION SYSTEMS, RESOURCE CENTERS, INFORMATION CENTERS, DOCUMENTATION, PUBLICATIONS, EDUCATIONAL RESEARCH, INTERAGENCY COOPERATION, EDUCATIONAL COORDINATION, INDEXES (LOCATERS), INFORMATION PROCESSING, ERIC, EDUCATIONAL RESOURCES INFORMATION CENTER, RESEARCH IN EDUCATION, RISE, RESEARCH AND INFORMATION SERVICES FOR ED,

COMMUNICATION IN EDUCATION IS A MANY CHANNELED PROCESS INVOLVING MESSAGE EXCHANGES WITHIN AND AMONG ALL LEVELS OF EDUCATION AND ALL COMPONENTS INCLUDED IN THE AMERICAN EDUCATION SYSTEM. THE OFFICE OF EDUCATION IS ATTEMPTING TO DEVELOP COMMUNICATION RESOURCES IN FOUR AREAS TO HELP CREATE ORDER IN THESE MESSAGE EXCHANGES. THE MOST DEVELOPED OF THESE AREAS IS PROVIDING QUICK ACCESS TO SIGNIFICANT RESEARCH AND DEVELOPMENT REPORTS THROUGH THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC) AND ITS CLEARINGHOUSES. A SECOND MAJOR FUNCTION, PROVIDED BY THE SUBJECT AREA CLEARINGHOUSES, IS REVIEWING THE EMERGING KNOWLEDGE IN THE FIELDS COVERED BY EACH AND PREPARING APPROPRIATE "PACKAGES" OF INFORMATION (STATE-OF-THE-ART REPORTS, BIBLIOGRAPHIES, ETC.) FOR DISSEMINATION TO EDUCATORS. THE OFFICE OF EDUCATION IS ALSO ENCOURAGING LOCAL INFORMATION CENTERS TO BE SET UP WHICH WOULD THEN USE THE PRODUCTS OF THE ERIC SYSTEM TO PROVIDE INDIVIDUALIZED SERVICES FOR THEIR USERS. TO INCREASE THE EFFICIENCY AND RANGE OF SERVICES THESE LOCAL CENTERS CAN PROVIDE, THE OFFICE OF EDUCATION IS STIMULATING AND WORKING TOWARD LINKAGES AMONG LOCAL, STATE, REGIONAL AND NATIONAL INFORMATION RESOURCES PERTINENT TO EDUCATION. APPENDICES INCLUDE--(1) A LIST OF ALL ERIC CLEARINGHOUSES, (2) A CHART OF THE ERIC DISSEMINATION SYSTEM, (3) A LIST OF THE PUBLICATIONS PRODUCED BY ERIC, AND (4) AN ARTICLE ABOUT THE RESEARCH AND INFORMATION SERVICES FOR EDUCATION INFORMATION CENTER, "A ONE-STOP INFORMATION CENTER", REPRINTED FROM AMERICAN EDUCATOR, JULY/AUGUST 1968. THIS PAPER WAS PRESENTED AT THE FOURTH ANNUAL CONFERENCE AND EXPOSITION ON EDUCATION AND TRAINING, AMERICAN MANAGEMENT ASSOCIATION (NEW YORK, AUGUST 14, 1968). (CM)

ED 017 748 30-07-68

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ED-017-748

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INFORMATION RETRIEVAL FOR EDUCATION AND TRAINING*

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Bureau of Research, U.S. Office of Education

Present chaos in educational communication

Attending this splendid conference are an estimated 1,500 representatives of elementary, secondary, higher and continuing education, Job Corps, State and Federal educational agencies, educational-oriented segments of business and industry, and the military. One hundred twenty seven (127) papers on trends and issues on education and training are being presented in the course of four days.

As I said, these gatherings are splendid--splendid for the small fraction of all persons interested in educational advances who could sit in any one session as compared with all who could benefit from hearing about or reading the papers presented at this conference. You might say what we have here is a failure to communicate, or, at least, a failure to provide for communication to others who are not present at the conference. To be sure, some educators not present will learn about some of the new ideas or practices presented here. But, if this conference is like so many others, most educators won't know it occurred and won't have the foggiest of what was presented in your many sessions. And this conference is only one of what must be thousands of annual national conferences where important new educational developments are first announced.

Conferences, however, are only one source of new information. There are at least two other major sources: (1) separate reports released by many Federal and some State and local educational agencies, many business and industrial organizations, and other groups now contributing to educational programs; and (2) the periodical literature relevant to education. The size of this combined literature is unknown: a conservative guesstimate is 75,000 quality documents per year, and there is little doubt that the curve is rising sharply. Also, with the upturn in production of significant educational R&D reports there is a corresponding increase in the "scatter" among the sources of these reports.

*Paper presented at the Fourth Annual Conference and Exposition on Education and Training, American Management Association, New York New York, August 14, 1968. To obtain a copy, write to the ERIC Document Reproduction Service, 4936 Fairmont Avenue, Bethesda, Maryland, 20014; ask for ED 017748. Microfiche: $ .25; hard copy: $ .56.

How can the superintendent in Keene, New Hampshire, a school board member in Kockuk, Iowa, or a teacher in Kaibab, Arizona select from this heterogeneous mass of information those specific items each needs to do his or her job better? And, if any educator learns, by chance or through more deliberate means, of certain reports or conference papers, what are his chances of obtaining a copy in time for it to be useful to him?

Answers to both questions are simple. Unless an educator is working on a project with generous funds to provide for assistants to chase down leads, is associated with a university with ample reference services, is part of an in-group--one of those national invisible colleges--or just happens to luck out, as we all sometimes do, his chances of staying abreast of recent developments are pretty slim. Yet, modern communications technology and well-tested procedures have been developed for providing for quick delivery of almost any portion of the world's literature to scientists or engineers working on Federally-supported projects anywhere in the United States. The theory, practices, and delivery systems developed for science and technology can work just as well for educators. The U.S. Office of Education has embarked upon development of interrelated local, State, and Federal information resources based on tested principles of science communication programs, to ensure access by educators anywhere in the country to significant, timely educational R&D reports.

Development of some kind of a national educational information network makes sense from a management point of view as well. Hundreds of millions of dollars are spent each year on educational R&D in the United States. Considerable additional effort and dollars are invested in reducing the results of educational R&D activities to the printed word. On the other hand, the several million educators whose behavior determines what the nation gets back for its annual 50 billion dollar investment in education are searching for new ideas and leads for improving their contributions to education of our children and youth. There must be a better way to link knowledge producers and users.

Toward improvement in educational communication

First, it would be a mistake to assume that there is an easy solution that would delight a systems analyst.

Communication in education will remain a many-channeled process involving message exchanges within and among all levels of education, fields or disciplines of specialization, public and private sectors, many professional organizations, and other components included in the American education system. Still, even modest activities can greatly improve educational communication systems. This is where the Office of Education comes in: resources from the Office of Education can provide help for developing and strengthening existing communication channels and for assisting groups to take advantage of recent advances in information systems. The Office of Education is attempting to develop communication resources that no single educational organization or even any combination of them could undertake and to provide assistance for helping to link separate resources. Specifically, work is progressing along four lines:

1. Providing quick access to significant R&D reports relevant to education--building the document base.

2. Interpreting, summarizing, and otherwise communicating the results of educational research and development efforts in the form and style that practitioners and decision-makers can understand and use--providing for information analysis.

3. Facilitating the capability of local and State educational agencies to use information effectively in planning, developing, or operating educational programs--developing local "one-stop" information service centers.

4. Promoting linkages among local, State, and national information resources--building the national educational information network.

To date most effort has gone into developing the base for providing access to reports.

Providing fast access to available documents

The Educational Resources Information Center (ERIC), of the Office of Education, is the heart, or more correctly, the brain or memory, of the projected network. ERIC consists of four inter-related components:

• Central ERIC--headquarters staff in the Division of Information Technology and Dissemination, Bureau of Research, USOE, responsible for coordinating and developing the system.

• The network of 19 clearinghouses--each clearinghouse focuses on a specific topic or field.[1/]

• A contractor, (North American Rockwell) to provide centralized computer and technical services.

• The ERIC Document Reproduction Service operated under contract by the National Cash Register Company, 4936 Fairmont Avenue, Bethesda, Maryland 20014.

Show system slide [2/]

Central ERIC is responsible for collection of final reports received from all projects supported by the Office of Education and other Federal agencies supporting research of interest to the education community. Documents also are received regularly from the National Education Association, State Departments of Education, and some foundations. In addition, each clearinghouse is responsible for collecting documents within its scope of interest from universities, professional organizations, individuals or other specialized producers of documents.

1/For the list of 19 clearinghouses, see Appendix A.

2/A flow-chart for the ERIC system is provided in Appendix B.

Once received, documents are reviewed for quality and significance to education by professional staff at the clearinghouses. Those selected are abstracted and indexed by assignment of retrieval terms from the provisional ERIC thesaurus. Resumes for all documents, including the abstracts, retrieval terms and bibliographical information, from all ERIC clearinghouses are forwarded to the North American Rockwell facility where they are merged, stored on magnetic tape, and prepared for announcement in Research in Education, ERIC's monthly abstract journal.

Research in Education is the main and continuing announcement bulletin for the ERIC system. New documents added to the ERIC collection (about 1,000 per month) are announced through this publication. An abstract is provided for each document, along with the usual identifying information and author, institution, and subject-matter indexes. Research in Education also contains an abstract of and indexed information about all new project awards made through the Bureau of Research, U.S. Office of Education. Research in Education is available through the Superintendent of Documents, Government Printing Office, Washington, D. C., at $11 per year, domestic, $13.75 foreign, or $1 per issue.

By the time documents are announced in Research in Education the final processing begun at the ERIC centers is completed. Copies of all reports cited in Research in Education (except for copyrighted items available only from the publishers) are forwarded to the ERIC Document Reproduction Service (EDRS) for microfilming and distribution. Prices for documents are listed with each citation in Research in Education and documents have to be ordered by their numbers through EDRS. Documents can be obtained in either microfiche or hard copy form.

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Special collections of documents also are organized through ERIC. In each case an abstract-index volume(s) is prepared and all documents are available as a set or by individual reports through EDRS. A list of the special collections now available through ERIC includes:

Show collections slide[3/]

1. The ERIC Collection on the Disadvantaged: 1740 documents; microfiche for $230; with two indexes: Catalog of Selected Documents on the Disadvantaged, A Number and Author Index (OE 37001) (65 cents), and a Subject Index (OE 37002) ($3.00).[4/]

[3/] Appendix C gives a list of collections with prices for indexes and costs for the full sets of documents.

[4/] With the exception of the index to the Higher Education Document Collection (see number 5 below), all ERIC indexes are available only through the Superintendent of Documents, U.S. Government Printing Office Washington, D.C. 20402.

2. Office of Education Research Reports 1956-1965: 1214 research reports on projects supported by USOE in the period 1956-65; microfiche for $280; the resume volume (OE 12029) ($1.75) and the index volume (OE 12028) ($2).

3. Pacesetters in Innovation: Fiscal Year 1966: 1075 Projects to Advance Creativity in Education (PACE) approved for support by USOE in fiscal year 1966: microfiche $100; resume and index volume (OE 20103) ($2.50).

4. Pacesetters in Innovation: Fiscal Year 1967: Projects to Advance Creativity in Education (PACE) approved for support by USOE in fiscal year 1967: microfiche $120 ; resume and index volume (OE 20103-67) ($2.50).

5. Number and Subject Index of Selected Documents of Higher Education: 845 reports; microfiche $115; index available through the ERIC Document Reproduction Service as ED 012110 : $ .50 on microfiche; $3.24 on hard copy.

6. Manpower Research, Inventory for Fiscal Years 1966 and 1967: 393 reports from projects funded by OEO and the Departments of Labor, HUD, and HEW; microfiche $60; the resume and index volume (OE 12031) (in press).

From time to time, other special collections may be developed. When they are, information about them will be provided in a special notice in Research in Education.

Several tools for helping persons use the ERIC system are available, including:

1. A brochure: ERIC Can Help--copies are available free.

2. The Thesaurus of ERIC Descriptors (First Edition), December, 1967 (OE-12031) contains about 3,100 descriptors and is used to select terms for searching the subject indexes of all ERIC bulletins: $2.50.

3. The Thesaurus of ERIC Descriptors (First Edition) Supplement No. 1, March, 1968 (OE-12031-1) adds approximately 400 new descriptors, with a rotated display of all ERIC descriptors. ($2.00).

4. Research in Education Annual Index--1967 Reports, combines the the indexes to reports cited in the first 14 issues of Research in Education: $3.25.

5. Research in Education Annual Index--1967 Projects, combines the indexes to projects cited in the first 14 issues of Research in Education: $1.50.

6. Research in Education: Semi-Annual Index--Reports, Jan.-June, 1968. (In press).

7. How to Use ERIC, a self instructional manual on how to use ERIC written from the viewpoint of a nontechnical person (in press).

Providing access to reports is only a start in ensuring use of information. Needed as well are sustained programs for integrating, summarizing and interpreting information from R&D reports in the style and format that can be understood by teachers and administrators.

Providing interpretations of information for use by practitioners

A second major function of each ERIC clearinghouse and one of increasing importance is to review the emerging knowledge in the fields covered by the clearinghouse and prepare appropriate "packages" of information for dissemination to educators. Among the interpretative dissemination activities of the clearinghouses are the preparation, publication and dissemination of:

1. Reviews or "state-of-the-art" reports on critical topics in education.

2. Bibliographies, long and short, many of which are annotated.

3. Newsletters, with featured short reviews, selected bibliographies and the usual notices and announcements of current developments.

4. Regular columns, based on ERIC outputs, in professional journals, now reaching close to 400,000 specialists in various fields.

In addition, the Office of Education provides direct support to groups for preparing interpretative summaries of research on topics of national importance. Also, numerous research reviews are prepared by the Regional Educational Laboratories and R&D Centers supported by the Office of Education.

Use by educators and researchers of the "raw" products (the original reports made available by EDRS) as well as the refined products (reviews, bibliographies, interpretative summaries, newsletters, etc.), however, depends in large part on development of local document depositories, educational libraries, and related reference services.

Developing local "one-stop" information service centers

Local educational information centers are coming into existance as part of some State and local educational agencies and as part of the operation of college and university libraries. Close to 200 organizations are buying Research in Education, other ERIC indexes, and the complete set of all ERIC microfiche. By adding reference, information repackaging, and local dissemination any school district or State educational agency can make it possible for any educator to have access to specific documents of interest to him among the thousands being produced each week.

Development of a local information service center, in theory, at least, is simple. ERIC has been designed for easy, complete local installation. Research in Education and other ERIC indexes provide the access tools, and the microfiche collections provide the documents. A user could locate what he wants from the indexes, cross the room, obtain the fiche he needs, read them on the spot, or have a copy made (microfiche or hard copy) and take them with him. Any organization that decides upon providing such service to its members can quickly acquire a previously indexed, ready-to-use, 15,000 report collection of screened educational R&D reports for about $2,000. Add several staff members for providing reference service and for maintaining the collection, acquire space, and some limited office furniture, a microfiche reader or two and maybe reader-printer, a telephone and some form of reproducing machine and a local center can be in business.5/

Local centers set in the working environment of educators are possible because of the backup resources of ERIC. Local centers pick up where ERIC or any other national system leaves off. National systems provide for efficient collection, processing, and bulk delivery of reports and indexes. Only local centers can provide a front-line depository of reports and individualized services needed to make use of the locally stored information.

Development of local centers, while resting upon local decision making, is being encouraged by the Office of Education. In addition to supporting ERIC, the Office of Education has arranged for production of resource or reference tools that should help educational organizations develop and operate local information service centers. Among these are a guide to information sources in the sciences and engineering; another guide to information sources in education and the behavior sciences; and a manual on the operation of a local information service center. These publications are being field tested in four institutes this month (August, 1968), and after possible revision, will be published for wide dissemination. Additional institutes for training staff for operating local information centers are planned for the summer, 1969.

5/ A brief note on the operation of one such center is provided in Appendix D.

Developing linkages among local centers and national systems

To increase the efficiency and range of services local centers can provide, the Office of Education is also stimulating and working toward linkages among local, State, regional, and national information resources pertinent to education. Present efforts can best be described as at a pre-network stage, including:

1. Development of "marketable" ERIC tapes. By the end of the year (1968), updated copies of ERIC tapes, required documentation, and assistance in using them should be available. The user will have to buy the tapes and pay for all installation and operating costs. Use of the tapes, however, will replace using the several indexes now required to search for documents among the nearly 15,000 that comprise the ERIC collection (as of August, 1968).

2. Extension of ERIC coverage to include indexing of periodical literature. Hopefully, by spring, 1969, about 400 education or education-related periodicals that include approximately 22,000 articles annually will be controlled through a monthly indexing journal prepared through ERIC but printed and marketed through a commercial outlet.

3. Development of the capacity for on-line interrogation of the ERIC files. Pilot work is underway. With good fortune, on-line retrieval of all information contained in ERIC resumes will be possible sometime in 1970. With the report literature in ERIC growing at an annual estimated rate of 12,000 documents and with an annual increment of perhaps 22,000 periodical citations, the ERIC file will grow from a base of nearly 15,000 in August 1968 to nearly 50,000 one year from now, and on to over 80,000 documents by the summer 1970. On-line querying will represent a large step in efficient searching of the file.

4. Stimulation of readiness among local and State educational agencies, colleges and universities, and other organizations to develop linkages for efficient use of ERIC tapes, build time sharing computer facilities, develop inter-library loan arrangements and to share reference and other information dissemination roles. Regional conferences are planned to help promote information systems thinking among educational organizations and to acquaint them with ERIC and other information systems that they can draw upon now.

Conclusion

Although information-dissemination systems are new to education, beginning about three years ago with the advent of ERIC, a solid start has been made in developing a national educational information network. With further effort, coordination and joint planning among local, State and Federal educational agencies, we can confidently look forward to the near future to assuring that any person anywhere in the country can have fast, direct, and productive access to much of the nation's significant output of new, recorded information from educational R&D efforts.

APPENDIX A

ERIC Clearinghouses

Dr. Roger DeCrow
ERIC Clearinghouse on Adult Education
Syracuse University
Syracuse, New York 13210

Dr. Gary Walz
ERIC Clearinghouse on Counseling and Personnel Services
611 Church Street, 3d Floor
Ann Arbor, Michigan 48105

Dr. Brian Carss
ERIC Clearinghouse on Early Childhood Education
University of Illinois
Urbana, Illinois 61801

Mr. Terry Eidell
ERIC Clearinghouse on Educational Administration
Hendricks Hall
University of Oregon
Eugene, Oregon 97403

Dr. Howard Wakefield
ERIC Clearinghouse on Educational Facilities
University of Wisconsin
Madison, Wisconsin 53703

Dr. Wilbur Schramm
ERIC Clearinghouse on Educational Media & Technology
Stanford University
Palo Alto, California 94305

Dr. June B. Jordan
ERIC Clearinghouse for Exceptional Children
National Education Association
Washington, D.C. 20036

Dr. Kenneth Mildenberger
ERIC Clearinghouse on the Teaching of Foreign Languages
Modern Language Association of America
New York, New York 10011

Dr. Robert E. Taylor
ERIC Clearinghouse on Vocational and Technical Education
Ohio State University
Columbus, Ohio 43212

Dr. Authur Cohen
ERIC Clearinghouse on Junior College Information
University of California
Los Angeles, California 90024

Dr. Harold F. Bright
ERIC Clearinghouse on Higher Education
George Washington University
Washington, D.C. 20006

Dr. Wesley Simonton
ERIC Clearinghouse on Library and Information Sciences
University of Minnesota
Minneapolis, Minnesota 55404

Dr. A. Hood Roberts
ERIC Clearinghouse for Linguistics
Center for Applied Linguistics
Washington, D.C. 20036

Dr. Edward G. Summers
ERIC Clearinghouse on Reading
Indiana University
Bloomington, Indiana 47401

Dr. Everett D. Edington
ERIC Clearinghouse on Rural Education and Small Schools
University Park Branch
New Mexico State University
Las Cruces, New Mexico 88001

Dr. Robert Howe
ERIC Clearinghouse on Science Education
Ohio State University
Columbus, Ohio 43221

Dr. Bernard O'Donnell
ERIC Clearinghouse on the Teaching of English
National Council of Teachers of English
Champaign, Illinois 61820

Dr. Edmund W. Gordon
ERIC Clearinghouse on the Urban Disadvantaged
Teachers College, Columbia University
New York, New York 10027

Dr. Joel L. Burdin
ERIC Clearinghouse on Teacher Education
1201 16th Street, NW.
Washington, D.C. 20036

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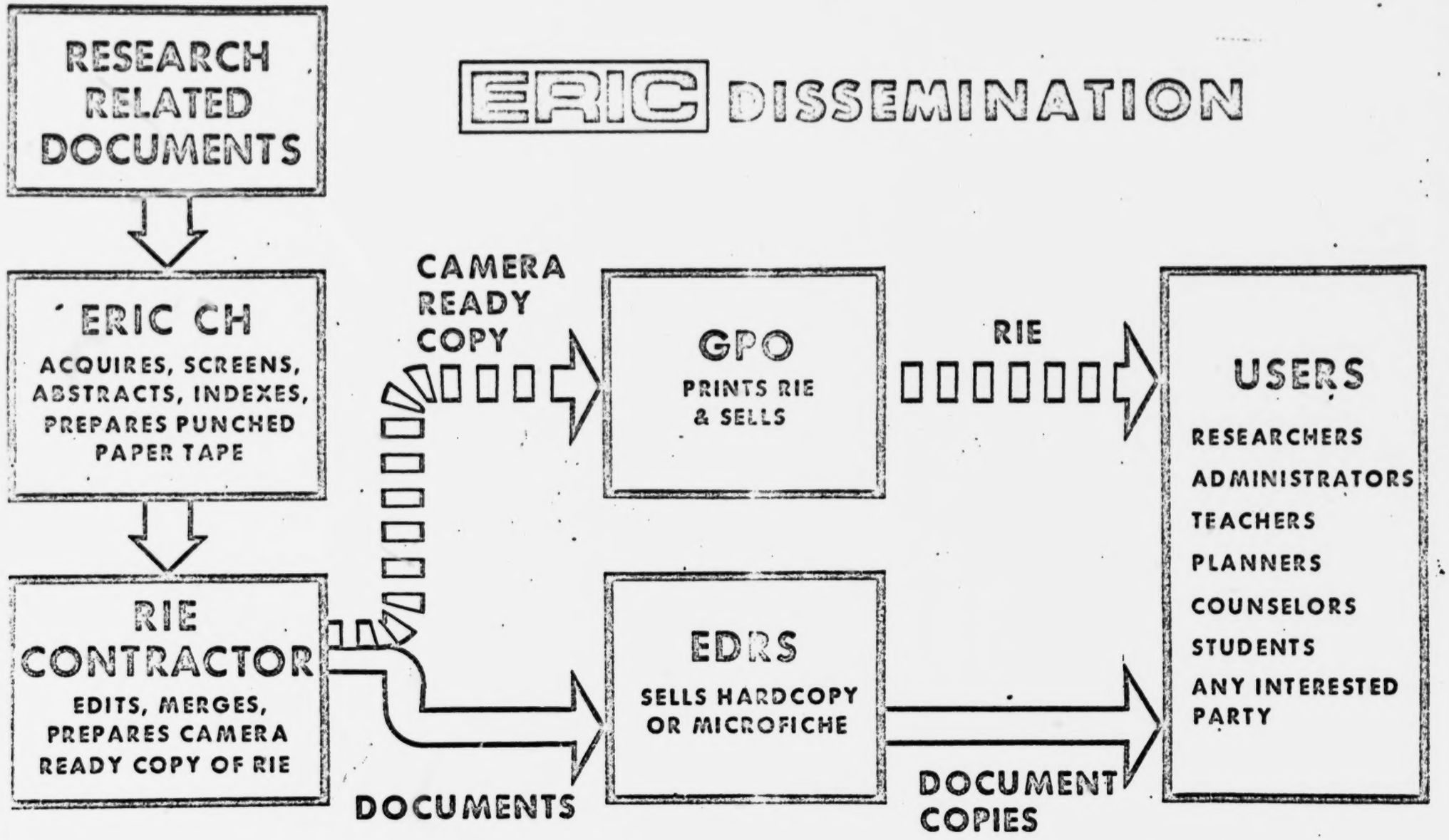
ERIC DISSEMINATION



APPENDIX B

APPENDIX C

TO USE ERIC

1. PURCHASE THESE PUBLICATIONS ONLY FROM ..... Superintendent of Documents U. S. Government Printing Office Washington, D. C. 20402		2. THEN PURCHASE DOCUMENT REPRODUCTIONS ONLY FROM NCR/EDRS 4936 Fairmont Avenue Bethesda, Maryland 20014
PUBLICATION	**GPO ORDER NUMBER AND PRICE**	**PRICES FOR MICROFICHE***
UBSCRIBE TO THE BASIC ERIC PUBLICATION ..... esearch in Education. Monthly Abstract Journal reporting newly nded research projects and recently completed research or research lated reports of interest to the educational community. Contains bstracts of projects and reports indexed by subject. Author or vestigator, and institution. Please send subscription orders separately om orders for other publications listed below.	Yearly Subscription Domestic $11.00 Foreign $13.75 Single Issues $ 1.00	$ .25 per individual microfiche STANDING ORDER price for all documents will vary with each issue, but will be calculated at a rate of 8.4¢ per microfiche. (Estimate $90 per month average) $490 for entire collection of 3,796 titles January–June, 1968.
IRST RESEARCH IN EDUCATION SUMMARY, 1967 ..... esearch in Education, 1967 Annual Index, Reports esearch in Education, 1967 Annual Index, Projects ummulates indexes of first 14 issues of RIE, ov. 1966-Dec. 1967, 2,349 titles.	(Order by title) $ 3.25 (Order by title) $ 1.50	$ .25 per individual microfiche $370.00 for entire collection
VALUABLE HISTORICAL COLLECTION ..... ffice of Education Research Reports 1956–1965, Résumés. bstracts of approximately 1214 research reports received by the ureau of Research before the start of publication of RIE. ffice of Education Research Reports 1956–1965, Indexes. ndexes reports by author, institution, subject, and report numbers.	OE–12029 $ 1.75 OE–12028 $ 2.00	$ .25 per individual microfiche $280.00 per entire collection
SSISTANCE FOR THE DISADVANTAGED ..... RIC Catalog of Selected Documents on the Disadvantaged. Number nd Author Index. 1746 Documents dealing with the special educa- onal needs of the disadvantaged. RIC Catalog of Selected Documents on the Disadvantaged. Subject ndex	OE–37001 $ .65 OE–37002 $ 3.00	$ .25 per individual microfiche $230.00 for entire collection
FFORTS UNDER TITLE III ..... acesetters In Innovation, Fiscal Year 1966. Resumes of projects to dvance creativity in education approved during fiscal year 1966 ndexed by subject, local education agency, and project number. 1075 ocuments covered. acesetters in Innovation, Fiscal Year 1967. Same coverage as above or 907 projects completed in fiscal 1967.	OE–20103 $ 2.50 OE–20103–67 $ 2.50	$ .25 per individual microfiche $100.00 for entire collection $ .25 per individual microfiche $120.00 for entire collection
IGHER EDUCATION COLLECTION ..... elected Documents in Higher Education, Number and Subject Index. overs 845 documents. Purchase this catalogue only from NCR/EDRS.	Order only from NCR/EDRS ED 012 110 $ 3.24 (HC) $ .50 (MF)	$ .25 per individual microfiche $115.00 for entire collection
OLLECTION BY INTERAGENCY COMMISSION ON MANPOWER ESEARCH ..... anpower Research, Inventory for Fiscal Years 1966 and 1967. eport Resumes and Indexes by Subject, Institution, Sponsoring gency, Investigator, and Report number, with cross reference index overing 393 documents funded by Department of Labor, OEO, HUD, nd HEW.	OE–12036 (IN PRESS)	$ .25 per individual microfiche $60.00 for entire collection
HESAURUS OF ERIC DESCRIPTORS ..... irst comprehensive subject authority for storing, searching, and isseminating educational research information. To be used in searching he subject indexes of RIE and other ERIC publications.	OE–12031 $ 2.50	Not a document collection

APPENDIX D

Reprinted from the U.S. Office of Education publication, AMERICAN EDUCATION, July/August 1968

A ONE-STOP INFORMATION CENTER

Practically all teachers agree that research has its place in education, though they may not feel that its place is in their own classroom right at the moment. Few of them attempt research projects of their own or go out of their way to read about what others have done. The same may be said about supervisors and principals.

But would these educators use research information if they didn't have to go out of their way to get it—if, somehow, reports of solutions to problems they deal with daily were right at hand? Would they put new developments to use in their classrooms if they didn't have to dig hard and long to find out what those new developments are? Would they, perhaps, even do some research of their own if it didn't mean tedious hours leafing through the literature?

"Yes, they would," says Donald W. Cox, an education consultant in Philadelphia who, until last month, was an associate director at Research and Information Services for Education (R.I.S.E.), a branch of the Montgomery County, Pa., public school system devoted to providing research services and to stimulating research-mindedness in the school personnel. And he's got the statistics to prove it.

In the 18 months that R.I.S.E. has been in action, teachers and administrators have made about 250 requests for research information. Additionally, there have been some 170 requests for duplicates of searches. Queries flow in at approximately 30 a month now as compared with a dribble of two or three at the beginning and through last summer.

Cox points out that the major products of R.I.S.E. are research summaries, bibliographies, and excerpts of significant journal articles. Eleven full-time and 14 part-time staffers are kept busy checking through education indexes and answering research requests which usually take from two days to a month to process, depending upon the complexity of the topic and the backlog—now running about two weeks. Duplicates of completed researches go out by return mail. Lists of available summaries are publicized by newsletters to all administrators and teachers in the school system.

"All 22 school districts in the county, plus some from Chester and Bucks counties, have made use of R.I.S.E. services," says Cox. "Teacher requests about equal those from principals, supervisors, and superintendents combined, and the information they want is mostly for on-the-job purposes —the use of teacher aides, elementary school departmentalization, reporting to parents, testing the visually handicapped, computer assisted instruction, and similar subjects that affect their professional day." There has been only a sprinkling of calls for exotic topics for graduate study—like 'Abt theory of gaming,' or 'Festinger's concept of cognitive dissonance.'

"Teachers ask us—usually by telephone—what we have on a particular subject," Dr. Cox continues. "Yesterday, for example, a young junior high school teacher who had just been appointed sponsor of a student council wanted to know how such organizations ordinarily operate and what their responsibilities are. Another request that just came in concerns the use of guitar in teaching folk history and culture in the elementary schools."

Research on reading has been the most popular subject to date, the roster shows. Teachers want all sorts of information about reading: basal versus phonics, remedial, reading in elementary and secondary schools, types of reading instruction, the Joplin (nongraded) reading system, reading for the partially sighted, individualized reading materials, linguistics, reading for the homebound, and special reading programs in junior high schools. Large demands have also been received for information about middle school organization, sex education, team teaching, and preschool education.

R.I.S.E., under its founder and director, Lester Mann, attempts to fill these wants. Dr. Mann, who is also director of special education for Montgomery County, for years had felt that teachers ought to be more interested in research. But preaching and prodding wouldn't make them research-minded, he knew, so when county school administrators invited ideas to be developed into proposals for funding under title III of the Elementary and Secondary Education Act, Mann suggested R.I.S.E. as a method of getting educational research into the hands of the teachers and administrators who ought to be making use of it. Now, 18 months, a title III planning grant, and a title III operational grant later, his project is serving the busy school people of "citified" eastern Pennsylvania.

The R.I.S.E. operation has access to a vast range of research sources. It maintains a large collection of current periodicals (but few hardcover texts), and has developed interlibrary loan machinery with nearby universities to supplement its holdings. The backbone of its own library, located near Valley Forge, is the microfiche output of the ERIC system (the Office of Education's Educational Resources Information Center, numbering about 10,000 documents as of July 1), plus all ERIC indexes and the major conventional microfilm collections such as those of the **Journal of Educational Research** and the **Review of Educational Research.** It also subscribes to the Educational Research Services of the American Association of School Administrators and during the first year of operation replaced Anchorage, Alaska, as the number one client of ERS. "For those who don't know the field," Cox smiles, "this minor education victory is akin to Avis replacing Hertz in the rent-a-car business."

Other standard references scanned include **Education Index, Psychological Abstracts, Reader's Guide to Periodical Literature, Dissertation Abstracts, Child Development Abstracts,** and **Scientific Abstracts.** For materials not yet in the abstracts, readers go through current issues of research journals.

"R.I.S.E. has generated substantial local interest outside the school circles of Montgomery and neighboring counties as well as within them," says Charles F. Haughey, director of its research services, mentioning that local newspapers have published several articles about the burgeoning enterprise and the staffers have been in demand as speakers.

"And," says Cox, "we've had the expected spin-off"—a favorite word of his—"in the form of attendance at research seminars. Professors come in from nearby Temple University and the University of Pennsylvania and help the teachers and administrators brush up on study skills, the psychology of reading, or operant conditioning."

But the "spin-off" in which Mann, Haughey, and Cox take greatest pride is that the project has become, fortuitously, a working model for the "one-stop information center" concept expounded by Lee G. Burchinal, OE's director of information technology and dissemination. Burchinal on a recent tour of R.I.S.E. complimented the operation for its unique concept of disseminating information, saying that R.I.S.E. is "a very sophisticated prototype in public school settings of the one-stop local information center."

Cox again: "R.I.S.E.—as its name connotes, is on the way up. The only question is how far, how fast, and how soon we will progress to becoming a truly comprehensive research information center that can become a model not only for ERIC's one-stop information center but for the rest of the Nation." ■

Additional information concerning R.I.S.E. may be obtained from Dr. Lester Mann, Research and Information Services for Education, 443 South Gulph Road, King of Prussia, Pa. 19406.